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<10> Hahn, Beatrice
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Shaw, George

<120> REFERENCE CLONES FOR NON-SUBTYPE B ISOLATES OF HUMAN
IMMUNODEFICIENCY VIRUS TYPE 1

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<213> Human immunodeficiency virus type 1

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<213> Human immunodeficiency virus type 1

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<211> 2661

<212> DNA

<213> Human immunodeficiency virus type 1

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<210> 17
<211> 246
<212> DNA
<213> Human immunodeficiency virus type 1

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<220>
<223> isolate=93BR020; gene=vpu

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agggtatata aaagaataag cgaagagcga gaagacagtg gcaatgagag tgagggggat 180
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<210> 18
<211> 2541
<212> DNA

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<213> Human immunodeficiency virus type 1

<220>

<223> isolate=93BR020; gene=env

<400> 18

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2541

<210> 19

<211> 27

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=93BR020; gene=nef

<400> 19

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27

<210> 20

<211> 8

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=93BR020; gene=gag-pol fusion

<400> 20

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<210> 21

<211> 207

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=92NG083; gene=gag

<400> 21

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<210> 22

<211> 2739

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=92NG083; gene=pol; note=NH2-terminus
uncertain

<400> 22

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<210> 23

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<211> 579
<212> DNA
<213> Human immunodeficiency virus type 1

<220>
<223> isolate=92NG083; gene=vif

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<210> 24
<211> 291
<212> DNA
<213> Human immunodeficiency virus type 1

<220>
<223> isolate=92NG083; gene=vpr

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<210> 25
<211> 2597
<212> DNA
<213> Human immunodeficiency virus type 1

<220>
<223> isolate=92NG083; gene=tat

<400> 25
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<210> 26

<211> 2663

<212> DNA

<213> Human immunodeficiency virus type 1

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<223> isolate=92NG083; gene=rev

<400> 26

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<210> 27

<211> 26
 <212> DNA
 <213> Human immunodeficiency virus type 1

<220>
 <223> isolate=92NG083; gene=vpu (defective); note=10 bp
 deletion early in vpu frameshifts, results in
 premature termination

<400> 27
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26

<210> 28
 <211> 2550
 <212> DNA
 <213> Human immunodeficiency virus type 1

<220>
 <223> isolate=92NG083; gene=env

<400> 28
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 agttctgaaa aacataatgt ctgggctaca catgcctgtg taccacaga cccaaccca 240
 caagaatag ctatagaaaa tgtaacagaa aattttaaca tgggaagaa taacatggta 300
 gaacagatgc aggagatgat aatcagttta tgggaggaaa gcctaaagcc atgtgtaaag 360
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<210> 29

<211> 1503

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=90CR056; gene=gag; CDS:
join(137..1434,1434..4443)

<400> 29

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ctagtacgag	tcctctattg	cgtacatcga	aaaatagatg	tgaagacac	caaggaggct	300
ttagataaga	tagaggaata	acaaaacaaa	agtcagcaaa	aaacacagca	agcagcagct	360
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 taa 1503

<210> 30
 <211> 579
 <212> DNA
 <213> Human immunodeficiency virus type 1

<220>
 <223> isolate=90CR056; gene=vif

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 agacatcatt ttgaaagcac tcatccaagg ataagttcag aagtacacat ccattagga 180
 gaagctaggat tagtcataac cacatactgg ggtctgaata caggagaaaag agaattggcat 240
 ttaggccagg gagtctccat agaattggaga ctgaaaaggat atagcacaca agtagagcct 300
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 caggtaggaa ctctacaata ctggcatta acagcattag tggcaccaaa aaagataaag 480
 ccacctttgc ctagtgttag aaagctagta gaggatagat ggaacaagcc ccagaagacc 540
 agggggccaca gagggagcca cacaatgaat ggacactag 579

<210> 31
 <211> 291
 <212> DNA
 <213> Human immunodeficiency virus type 1

<220>
 <223> isolate=90CR056; gene=vpr

<400> 31
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 caattaggac agcatatcta taacacctat ggagataact gggtaggagt tgaagcttta 180
 ataagaacgc tgcaacaact actgtttatt catttcagaa ttgggtgcca acatagcaga 240
 ataggaaata ctgcagacag agagtaaga aatggaccca gtagatccta a 291

<210> 32
 <211> 624
 <212> DNA
 <213> Human immunodeficiency virus type 1

<220>
 <223> isolate=92NG083; gene=nef

<400> 32
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ggagcaatca caagcagcaa tacagcaacc aacaatcctg attgtgctcg gctggaagca 180
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<210> 33

<211> 2606

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=90CR056; gene=tat; CDS: join (5177..5391,
7698..7782)

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<210> 34

<211> 2657

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=90CR056; gene=rev; CDS: join(5316..5391,
7698..7972)

<400> 34

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<210> 35

<211> 243

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=90CR056; gene=vpu

<400> 35

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ctaattgaaa gaataggaga aagagcagaa gacagtgcca acgagagtga tggagacaca 180
gaggaattat ccaagcttat ggagatgggg cacccttaac ttgggtatgt tgctgactct 240
tag 243

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<210> 36

<211> 2538

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=90CR056; gene=env

<400> 36

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 <213> Human immunodeficiency virus type 1

<220>
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<210> 38
 <211> 1486
 <212> DNA
 <213> Human immunodeficiency virus type 1

<220>
 <223> isolate=92RW009; gene=gag

<400> 38
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<210> 39

<211> 579

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=92RW009; gene=vif

<400> 39

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agacatcatt atgaaggcag acatccaaaa ataagtttcag aagtacacat cccattaggg 180
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aaggtaggat ctctacaata cttggcactg acagcattga taaaaccaa aaagataaag 480
ccacctctgc ctagtgttag taaattagta gaggataaat ggaacaagcc ccagaagacc 540
agggggccga gagggaaaca tacaatgaat ggacactag 579

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<210> 40

<211> 291

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=92RW009; gene=vpr

<400> 40

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gacttaggac aatatactta tgaacactat ggggatactt ggagggaggat agaagctata 180
ataagaattc tgcaacaact actgtttatc catttcagaa ttgggtgccg gcatagcaga 240
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<210> 41

<211> 2640

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=92RW009; gene=tat

<400> 41

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<210> 42

<211> 2658

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=92RW009; gene=rev

<400> 42

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<210> 43
<211> 246
<212> DNA
<213> Human immunodeficiency virus type 1

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<220>
<223> isolate=92RW009; gene=vpu

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ttgtag                                246

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<210> 44
<211> 2583
<212> DNA
<213> Human immunodeficiency virus type 1

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<220>
<223> isolate=92RW009; gene=env

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<400> 44
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<210> 45

<211> 624

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=92RW009; gene=nef

<400> 45

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gtcttaaagt ggaagtttga cagtcaccta gcacacagac acatggcccg cgagctacat 600
ccggagtatt ataaagactg ctga 624

<210> 46

<211> 8

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=92RW009; standard name=3' LTR repeat
region; note=3' R repeat should end one base
beyond end of this

<400> 46

aaaaaaaa

8

<210> 47

<211> 1494

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=92NG003; gene=gag

<400> 47

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<210> 48

<211> 4307

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=92NG003; gene=gag-pol fusion

<400> 48

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<210> 49

<211> 579

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=92NG003; gene=vif

<400> 49

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 caggtaggat cactacaata tttagcactc aaagcattag taacaccaac acagacaaag 480
 ccacctttac cttaggttaa gaagttaaca gaagatagat ggaacgagcc ccagaagacc 540
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<210> 50

<211> 114

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=92NG003; gene=vpr

<400> 50

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<210> 51

<211> 2578

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=92NG003; gene=tat

<400> 51

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 agtcaccagg atcatcaaaa tcctgtacca aagcagtgag tagtaatagt tagtatatgt 240
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<210> 52

<211> 2645

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=92NG003; gene=rev

<400> 52

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<210> 53

<211> 230

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=92NG003; gene=vpu

<400> 53

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 taagagaaa agcagaagat agtggaatg agagtgaagg ggacacagag gaattggcaa 180
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<210> 54

<211> 2538
 <212> DNA
 <213> Human immunodeficiency virus type 1

<220>

<223> isolate=92NG003; gene=env

<400> 54

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<213> Human immunodeficiency virus type 1

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<223> isolate=93BR029; gene=vif

<400> 58

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<211> 291

<212> DNA

<213> Human immunodeficiency virus type 1

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<400> 59

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<211> 2601

<212> DNA

<213> Human immunodeficiency virus type 1

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<211> 2529

<212> DNA

<213> Human immunodeficiency virus type 1

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<400> 62

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<210> 63

<211> 621

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=93BR029; gene=nef

<400> 63

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ttccctgatt	ggcagacact	cacaccaggg	ccagggacca	gatattccact	gaccttaggg	420
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aacaactgct	tgctacaccc	catgagccaa	catggaatgg	aggatgaaga	cagagaaata	540

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<210> 64
<211> 1503
<212> DNA
<213> Human immunodeficiency virus type 1

<220>
<223> isolate=94CY032.3; gene=gag

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<210> 65
<211> 3009
<212> DNA
<213> Human immunodeficiency virus type 1

<220>
<223> isolate=94CT032.3; gene=pol

<400> 65

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acaggagcag	atgatcacgt	attagaagaa	ataaatttgc	cagggaaaatg	gaagccaaaa	300
atgatagggg	gaatcgagg	ttttatcaaa	gtaagacaat	atgatccagat	acctatagaa	360
atttgtggaa	aaaaggccat	aggcacagt	ttagtaggac	ctacacctgt	caacataatt	420
ggagcgaaca	tgttgactca	gcttggttgc	actttaaatt	ttccaattag	tcctattgaa	480
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gaagattag                                     3009

```

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<210> 66
<211> 579
<212> DNA
<213> Human immunodeficiency virus type 1

```

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<220>
<223> isolate=94CT032.3; gene=vif

```

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ccacctttgc ctatgtttaa gaaactagtg gaggatagat ggaacaagcc ccagaagacc 540
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```

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<210> 67
<211> 288
<212> DNA
<213> Human immunodeficiency virus type 1

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<220>
<223> isolate=94CY032.3; gene=vpr

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<400> 67
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ataagaattt tgcaacaact actgtttatt catttcagaa ttgggtgcca acatagtaga 240
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```

```

<210> 68
<211> 2643
<212> DNA
<213> Human immunodeficiency virus type 1

```

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<220>
<223> isolate=94CT032.3; gene=tat

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```

<400> 68

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<210> 69

<211> 2688

<212> DNA
<213> Human immunodeficiency virus type 1

<220>
<223> isolate=94CT032.3; gene=rev

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<210> 70

<211> 246

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=94CT032.3; gene=vpu

<400> 70

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 agcttgtaca atagaataag agaaagagca gaagacagt gcaatgagag tgatggggat 180
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<210> 71

<211> 2571

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=94CY032.3; gene=env

<400> 71

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<210> 72

<211> 660

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> nef

<400> 72

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<210> 73

<211> 1485

<212> DNA
 <213> Human immunodeficiency virus type 1

<220>

<223> isolate=96ZM651.8; gene=gag

<400> 73

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<210> 74

<211> 3000

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=96ZM651.8; gene=pol

<400> 74

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ccccttgtct caataaagggt agggggccaa ataaaggagg ctctcttaga cagggagcga 240
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<210> 75

<211> 579

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=96ZM651.8; gene=vif

<400> 75

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<210> 76

<211> 291

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=96ZM651.8; gene=vpr

<400> 76

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<210> 77

<211> 2666

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=96ZM651.8; gene=tat

<400> 77

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<210> 78

<211> 2684

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=96ZM651.8; gene=rev

<400> 78

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<210> 79

<211> 261

<212> DNA
<213> Human immunodeficiency virus type 1

<220>

<223> isolate=96ZM651.8; gene=vpu

<400> 79

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<210> 80

<211> 2607

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=96ZM651.8; gene=env

<400> 80

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<210> 81

<211> 621

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> nef

<400> 81

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<210> 82

<211> 1496

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=962M751.3; gene=gag

<400> 82

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<210> 83

<211> 3017

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=96AM751.3; gene=pol

<400> 83

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<210> 84

<211> 579

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=96ZM751.3; gene=vif

<400> 84

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<210> 85

<211> 291

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=96ZM751.3; gene=vpr

<400> 85

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<210> 86

<211> 2646

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=96AM751.3; gene=tat

<400> 86

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2646

<210> 87

<211> 2631

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=96ZM751.3; gene=rev

<400> 87

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<210> 88

<211> 261

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=96AM751.3; gene=vpu

<400> 88
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 caaagaaaaa tagaccggtt aattaaaaga attagagaaa gggcagaaga cagtggcaat 180
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<210> 89
 <211> 2544
 <212> DNA
 <213> Human immunodeficiency virus type 1

<220>
 <223> isolate=96AM751.3; gene=env

<400> 89
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 aataacaaca cagaattaag agataagagg aggcaagttag atgcactctt ttataaactt 540
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<210> 90

<211> 624

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=96AM751.3; gene=nef

<400> 90

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ttaattttact gtaagaaaaa acaagaaatc ctgcatttgt ggggtctatca cacacaaggc 360
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ccggagtatt acaagactg ctga 624

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<210> 91

<211> 1491

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=94CY017.41; gene=gag

<400> 91

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ataaggcagt tacaaccagc tctccaaaca ggaacagaag aacttaaatc attataaat 240
acagtatgat tctcttactg ggtacatcaa agggtagatg taaaagacac caaggaagct 300
ctagataaaa tagaggaaga aaaaacaag cagaaaaac acgatgcagc agctgcacac 360

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gggaacagca gcagtcacaa ttatcccata gtgcaaaatg cacaagggca aatgggtacac 420
cagggtatat caccatggag gttgaatgcc tgggtcaaag tagtagaaga aaaggctttc 480
agcccaagaag taatacctat gtttacagca ttatcagaag gagccacccc caagactta 540
aatactatgc taaacacagt ggggggacat caagcagcta tgcaaatgtt aaaagatacc 600
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<210> 92

<211> 3012

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=94CY017.41; gene-pol

<400> 92

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cctgaagcag gaactggaga ccagggaacc atacaatcct gcaattttcc tcaaatcaact 180
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<210> 93
<211> 579
<212> DNA
<213> Human immunodeficiency virus type 1

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<220>
<223> isolate=94CY017.41; gene=vif

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<210> 94

<211> 291

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=94CY017.41; gene=vpr

<400> 94

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<210> 95

<211> 2655

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=94CY017.41; gene=tat

<400> 95

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<211> 2721

<212> DNA

<213> Human immunodeficiency virus type 1

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<210> 97

<211> 246

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=94CY017.41; gene=vpu

<400> 97

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<210> 98

<211> 2598

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=94CY017.41; gene=env

<400> 98

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<210> 99

<211> 654

<212> DNA

<213> Human immunodeficiency virus type 1

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<223> isolate=94CY017.41; gene=nef

<400> 99

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<210> 100

<211> 1476

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=94IN476.104; gene=gag

<400> 100

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<210> 101

<211> 3011

<212> DNA

<213> Human immunodeficiency virus type 1

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<223> isolate=94IN476.104; gene=pol

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<211> 579

<212> DNA

<213> Human immunodeficiency virus type 1

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<210> 103
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<210> 104
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 <212> DNA
 <213> Human immunodeficiency virus type 1

<220>
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<211> 2651

<212> DNA

<213> Human immunodeficiency virus type 1

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<210> 106

<211> 261

<212> DNA

<213> Human immunodeficiency virus type 1

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<223> isolate=94IN476.104; gene=vpu

<400> 106

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<210> 107

<211> 2574

<212> DNA

<213> Human immunodeficiency virus type 1

<220>

<223> isolate=94IN476.104; gene=env

<400> 107

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<212> DNA
<213> Human immunodeficiency virus type 1

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